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INDIAN ART AND INDUSTRIES.

EXCERPT FROM THE HANDBOOK OF AMERICAN INDIANS
(*Bulletin 30, Bureau of Ethnology*)

THE TERM "ART" is sometimes applied to the whole range of man's cultural activities, but as here employed it is intended to refer only to those elements of the arts which in the higher stages of culture come fully within the realm of taste and culminate in the ornamental and fine arts. Among primitive peoples many of these esthetic elements originate in religious symbolism. Among the tribes north of Mexico such elements are exceedingly varied and important and extend in some degree to all branches of the arts in which plastic, graphic, sculptural, constructional, and associative processes are applicable as well as to the embellishment of the human person. These symbolic elements consist very largely of natural forms, especially of men and beasts, and of such natural phenomena as the sun, stars, lightning, and rain, and their introduction is probably due largely to the general belief that symbols carry with them something of the essence, something of the mystic influence of the beings and potencies which they are assumed to represent. In their introduction into art, however, these symbols are subject to esthetic influence and supervision, and are thus properly classed as embellishments. In use they are modified in form by the various conventionalizing agencies of technique, and a multitude of variants arise which connect with and shade into the great body of purely conventional decoration. Not infrequently, it is believed, the purely conventional designs originating in the esthetic impulse receive symbolic interpretations, giving rise to still greater complexity. Entering into the arts and subject to similar influences are also many ideographic signs and representations which contribute to embellishment and to the development of purely esthetic phases of art. These elements, largely pictographic, contribute not only to the growth of the fine art, painting, but equally to the development of the recording art, writing. The place occupied by the religious, ideographic, and simply esthetic elements in the various arts of the northern tribes may be briefly reviewed:

(1) The building arts, employed in constructing dwellings, places of worship, etc., as practised north of Mexico, although generally primitive, embody various religious and esthetic elements in their nonessential elaborations. As a rule, these are not evolved from the constructive features of the art, nor are they expressed in terms of construction. The primitive builder of houses depends mainly on the arts of the sculptor and the painter for his embellishments. Among Pueblo tribes, for example, conventional figures and animals are painted on the walls of the kivas, and on their floors elaborate symbolic figures and religious personages are represented in dry painting; at the same time nonsignificant pictorial subjects, as well as purely decorative designs, occur now and then on the interior walls, and the latter are worked out in crude patterns in the stonework of the exterior. Though

the buildings themselves present many interesting features of form and proportion, construction has not been brought to any considerable degree under the supervision of taste. The dwellings of primitive tribes in various parts of the country, constructed of reeds, grass, sod, bark, mats, and the like, are by no means devoid of that comeliness which results from careful construction, but they show few definite traces of the influence of either symbolism or the esthetic idea. The skin tipis of the Plains tribes present tempting surfaces to the artist, and are frequently tastefully adorned with heraldic and religious symbols and with graphic designs painted in brilliant colors, while the grass lodge is embellished by emphasizing certain constructive features in rhythmic order, after the manner of basketry. The houses of the northwest coast tribes, built wholly of wood, are furnished within with carved and painted pillars, whose main function is practical, since they serve to support the roof, while the totem-poles and mortuary columns outside, still more elaborately embellished, are essentially emblematic. The walls both within and without are often covered with brilliantly colored designs embodying mythologic conceptions. Although these structures depend for their effect largely on the work of the sculptor and the painter, they show decided architectural promise, and suggest the possibilities of higher development and final esthetic control, as in the great architectural styles of the Old World.

(2) The art of sculpture, which includes also carving, had its birth, no doubt, in the fashioning of implements, utensils, ornaments, and sacred objects; and embellishments, symbolic and esthetic, which were at first entirely subordinate, were gradually introduced as culture advanced, and among some of the northern tribes acquired great prominence. The sculpture elaborations consist of life elements, such as men and beasts, executed in relief and in the round, and having an esthetic as well as a religious function This strong sculptural tendency is well illustrated by the stone pipes, ornaments, and images of the mound-builders of the Mississippi Valley, the carvings of the pile-dwellers of Florida, the masks, utensils, and totem poles of the northwest coast tribes, and the spirited ivory carvings of the Eskimo. Sculpture, the fine art, is but a higher phase of these elementary manifestations of the esthetic.

(3) The plastic art was practised with much skill by all the more advanced American tribes. North of Mexico the potter's art had made exceptional progress in two great specialization areas—the Pueblo country of the southwest and the Mississippi Valley—and symbolic elements, derived mainly from the animal kingdom, were freely introduced, not only as modifications of the fundamental shapes of vases, but as embellishments variously and tastefully applied. The supervision of taste extended also to the simple forms of vases, the outlines being in many cases highly pleasing even to persons of culture.

(4) Closely allied with the plastic art is the metallurgic art, which had made sufficient progress among the tribes north of Mexico

to display traces of the strong aboriginal bent for the esthetic. From the mounds of Ohio, especially from the Chillocothe district, many implements, ornaments, and symbolic objects of copper have been obtained, certain highly conventional ornamental figures in sheet-copper being especially noteworthy. From mounds of the Etowah group, in Georgia, numerous repousse images executed in sheet-copper have been recovered which, as illustrations of artistic as well as of mechanical achievement, take precedence over most other aboriginal works north of Mexico.

(5) The textile art, which for present purposes may be regarded as including, besides weaving proper, the arts of basketry, needlework, beadwork, quillwork, featherwork, etc., as practised by the northern tribes, abounds in both symbolic and purely decorative elements of embellishment. The former have their origin, as in the other arts, in mythology, and the latter arise mainly from the technical features of the art itself. No branch of art practised by the primitive tribes calls so constantly for the exercise of taste as does this, and probably none has contributed so greatly to the development of the purely geometric phases of decorative art. Illustrations may be found in the weaving of the Pueblo and Navajo tribes of the arid region and the Chilkat of the Northwest, in the basketry of numerous tribes of the far West and Southwest, and in the beadwork, quillwork, embroidery, and featherwork of tribes of the great plains, the upper Mississippi Valley, and the region of the Great Lakes.

(6) Primitive phases of the art of painting and other related branches, such as engraving and tattooing, appear in the handiwork of all of the northern tribes. Colors were employed in decorating the human body, in embellishing manufactured articles of all kinds, and in ideographic delineations on bark, skins, rock surfaces, etc. A branch of much importance was, and is, the decoration of earthenware, as among the Pueblo tribes; and allied to this was the painting of masks and other carvings as among the Haida and Kwakiutl of the Northwest and the painting of skins, as among the Plains tribes. In only a few cases had considerable progress been made in pictorial art; perspective, light and shade, and portriature were unknown. Engraving and stamping were favorite means of decorating pottery among the ancient tribes of eastern United States, and tattooing was common among many tribes.

Besides those branches of art in which taste manifests itself in elaborations of color, form, proportion, and arrangement there are other arts coming less within the range of the practical and having a correspondingly greater proportion of the symbolic and esthetic elements, namely, music, poetry, and drama. All of these have their root deep down in the substrata of human culture, and they take a prominent place in the ceremonial and esthetic of the primitive tribesmen.

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The arts and industries of the North American aborigines, including all artificial methods of making things or of doing work, were numerous and diversified, since they were not limited in purpose to the material conditions of life; a technic was developed to gratify the esthetic sense, and art was ancillary to social and ceremonial institutions and was employed in inscribing speech on hide, bark, or stone, in records of tribal lore, and in the service of religion. Many activities, too, existed not so much in the service of these for their own sake as for others. After the coming of the whites, arts and industries in places were greatly improved, multiplied in number, and rendered more complex by the introduction of metallurgy, domestic animals, mechanical devices, and more efficient engineering. Great difficulties embarrass the student in deciding whether some of the early crude inventions were aboriginal or introduced.

The arts and industries of the Indians were called forth and developed for utilizing the mineral, vegetal, and animal products of nature, and they were modified by the environmental wants and resources of every place. Gravity, buoyancy, and elasticity were employed mechanically, and the production of fire with the drill and by percussion was also practised. The preservation of fire and its utilization in many ways were also known. Dogs were made beasts of burden and of traction, but neither beast nor wind nor water turned a wheel north of Mexico in pre-Columbian times. The savages were just on the borders of machinery, having the reciprocating two-hand drill, the bow and strap drills, and the continuous-motion spindle.

Industrial activities were of five kinds: (1) Going to nature for her bounty, the primary or exploiting arts and industries; (2) working up materials for use, the secondary or intermediary arts and industries, called also shaping arts or manufactures; (3) transporting or traveling devices; (4) the mechanism of exchange; (5) the using up or enjoyment of finished products, the ultimate arts and industries, or consumption. The products of one art or industry were often the material or apparatus of another, and many tools could be employed in more than one; for example, the flint arrowhead or blade could be used for both killing and skinning the buffalo. Some arts or industries were practised by men, some by women, others by both sexes. They had their seasons and their etiquette, their ceremonies and their tabus.

Stone Craft: This embraces all the operations, tools, and apparatus employed in gathering and quarrying minerals and working them into paints, tools, implements, and utensils, or into ornaments and sculptures, from the rudest to such as exhibit the best expressions in fine art. Another branch is the gathering of stone for building.

Water Industry: This includes activities and inventions concerned in finding, carrying, storing, and heating water, and in irrigation, also, far more important than any of these, the making of vessels for plying on the water, which was the mother of many arts.

The absence of the larger beasts of burden and the accommodating waterways together stimulated the perfecting of various boats to suit particular regions.

EARTH WORK: To this belong gathering, carrying, and using the soil for construction purposes, excavating cellars, building sod and snow houses, and digging ditches. The Arctic permanent houses were made out of earth and sod, the temporary ones of snow cut in blocks, which were laid in spiral courses to form low domes. The Eskimo were especially ingenious in solving the mechanical problems presented by their environment of ice. The St. Lawrence, Atlantic, and Canadian tribes undertook no earth-building that required skill; but those of the Mississippi Valley, the Gulf States, and the far Southwest, in their mounds and earth works developed engineering and cooperative ability of no mean order. In some cases millions of cubic feet of earth were built up into geometric forms, the material often having been borne long distances by men and women. The tribes of the Pacific coast lived in partly subterranean houses. The Pueblo tribes were skilful in laying out and digging irrigating ditches and in the builder's art, erecting houses and walls of stones, pise, or adobe. Some remains of stone structures show much taste in arrangement.

CERAMIC ART: This industry includes all operations in plastic materials. The Arctic tribes in the extreme West, which lack proper stone, kneaded with their fingers lumps of clay mixed with blood and hair into rude lamps and cooking vessels, but in the zone of intense cold besides the ruder form there was no pottery. The tribes of Canada and of the Northern tier of States west of Lake Superior and those of the Pacific slope worked little in clay; but the Indians of the Atlantic slope, of the Mississippi Valley, and especially of the Southwest knew how to gather and mix clay and form it into pottery, much of which has great artistic merit. This industry was quite generally woman's work, and each region shows separate types of form and decoration.

METAL CRAFT: This included mining, grinding of ores and paint, rubbing cold-hammering, engraving, embossing, and overlaying with plates. The metals were copper, hematite, and meteoric iron, lead in the form of galena, and nugget gold and mica. No smelting was done.

WOOD CRAFT: Here belongs the felling of trees with stone axes and fire. The softest woods, such as pine, cedar, poplar, and cypress, were chosen for canoes, house frames, totem poles, and other large objects. The stems of smaller trees were also used for many purposes. Driftwood was wrought into bows by the Eskimo. As there were no saws, trunks were split and hewn into single planks on the northern Pacific coast. Immense communal dwellings of cedar were there erected, the timbers being moved by rude mechanical appliances and set in place with ropes and skids. The carving on house posts, totem poles, and household furniture was often admirable. In the

Southwest, underground stems were carved into objects of use and ceremony.

ROOT CRAFT: Practiced for food, basketry, textiles, dyes, fish-poisoning, medicine, etc. Serving the purposes of wood, the roots of plants developed a number of special arts and industries.

FIBER CRAFT: Far more important than roots for textile purposes, the stems, leaves, and inner and outer bark of plants and the tissues of animals, having each its special qualities, engendered a whole series of arts. Some of these materials were used for siding and roofing houses; others yielded shredded fiber, yarn, string, and rope; and some were employed in furniture, clothing, food receptacles, and utensils. Cotton was extensively cultivated in the Southwest.

SEED CRAFT: The harvesting of berries, acorns, and other nut, and grains and other seeds developed primitive methods of gathering, carrying, milling, storing, cooking, and serving, with innumerable observances of days and seasons, and multifarious ceremony and lore.

Not content with merely taking from the hand of nature, the Indians were primitive agriculturists. In gathering roots they first unconsciously stirred the soil and stimulated better growth. They planted gourds in favored places and returned in autumn to harvest the crops. Maize was regularly planted on ground cleared with the help of fire and was cultivated with sharpened sticks and hoes of bone, shell, and stone. Tobacco was cultivated by many tribes, some of which planted nothing else.

ANIMAL INDUSTRIES: Arts and industries depending on the animal kingdom include primarily hunting, fishing, trapping, and domestication. The secondary arts involve cooking and otherwise preparing food; the butchering and skinning of animals, skin-dressing in all its forms: cutting garments, tents, boats, and hundreds of smaller articles and sewing them with sinew and other thread; working claws, horn, bone, teeth, and shell into things of use, ornaments, and money; and work in feathers, quills, and hair. These industries went far beyond the daily routine and drudgery connected with dress, costume, receptacles, and apparatus of travel and transportation. Pictographs were drawn on specially prepared hides; drums and other musical instruments were made of skins and membranes for gorgeous headdresses and robes of ceremony and rarest and finest products of animals were requisite; embroiderers everywhere most skilfully used quills and feathers, and sometimes grass and roots.

EVOLUTION OF ARTS: Much was gathered from nature for immediate use or consumption, but the North Americans were skilful in secondary arts, becoming manufacturers when nature did not supply their demands. They built a different kind of house in each environment—in one place snow domes and underground dwellings; in another, houses of puncheons hewn from the giant cedar; and in other regions, conical tents made of hides of animals; pole arbors covered with matting or with cane, and houses of sods or grass laid on a

framework of logs. The invention of house furniture and utensils, such as cooking vessels of stone, pottery, or vegetal material, vessels of clay, basketry, worked bark or hide for serving food, and bedding, developed the tanner, the seamstress, the potter, the woodworker, the painter, the dyer, and the stonecutter. The need of clothing the body also offered employment to some of these and gave rise to other industries. The methods of preparing food were baking in pits, roasting, and boiling; little invention was necessary therein, but utensils and apparatus for getting and transporting food materials had to be devised. These demands developed the canoemaker and the sledbuilder, the fabricator of weapons, the stoneworker, the woodworker, the carvers of bone and ivory, the skilful basketmaker, the weaver, the netter, and the makers of rope and babiche. These arts were not finely specialized: one person would be skilful in several. The workshop was under the open sky, and the patterns of the industrial workers were carried in their minds.

The arts and industries associated with the use and consumption of industrial products were not specially differentiated. Tools, utensils, and implements were worn out in the using. There was also some going about, traffic, and luxury, and these developed demands for higher grades of industry. The Eskimo had fur suits that they would not wear in hunting; all the deer-chasing tribes had their gala dress for festal occasions, ceremony, and worship upon which much time and skill were expended; the southern and western tribes wove marvously fine and elegant robes of hemp, goat's hair, rabbit skin in strips, and skins of birds. The artisans of both sexes were instinct with the esthetic impulse; in one region they were devoted to quillwork, those of the next area to carving wood and slate; the ones living across the mountains produced whole costumes adorned with beadwork; the tribes of the central area erected elaborate earthworks; workers on the Pacific coast made matchless basketry; those of the Southwest modeled and decorated pottery in an endless variety of shapes and colored designs. The Indians north of Mexico were generally well advanced in the simpler handicrafts, but had nowhere attempted massive stone architecture.

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